

Advanced Metering and Emerging Technologies



California is in the process of transforming its electric sector from a system using 1960s era technology to an intelligent, integrated network enabled by modern information and control system technologies.

This transformation can decrease the costs of operating and maintaining the electrical system, while also providing customers with accurate information on energy use, time of use, and cost.

To achieve this transformation, the CPUC will ensure that appropriate, cost-effective technologies are chosen, emphasize public education regarding the benefits of such technologies, and develop tariffs and programs that result in cost-effective savings and inducements for customers to achieve those savings.

Investment in emerging technologies and advanced metering solutions helps California meet aggressive goals in efficiency, conservation and demand response. It:

- Creates lasting value by empowering energy customers with cost-effective, "smart" meters that provide more information for better decision making on energy use.
- Provides the foundation for industry innovation toward next generation technology that increases functionality, flexibility and savings.
- Modernizes California's infrastructure with technologies that create an "intelligent" energy grid.

Advanced metering programs and projects provide financial savings for customers by allowing utilities to read customer energy data remotely and reducing operational costs. Customers gain access to detailed usage information online, allowing them to better manage energy consumption and control their energy bills.

The ability to monitor energy usage through "smart" meters gives customers the incentive to conserve energy and shift energy usage, decreasing pressure on the power grid and the number of power plants – both of which are good for California.



Emerging Technologies & Research, Development, and Demonstration

California's continued success in supplying an efficient and diverse mix of resources to meet our energy needs is dependent upon technological innovations. The CPUC is committed to encouraging research, development, and demonstration (RD&D) projects in technologies that will allow California to achieve its policies to make energy efficiency, demand response and



renewable resources more effective and cost-competitive.

The California Public Utilities Commission (CPUC) has provided \$11 million dollars annually in funding support for emerging technologies for 2006 through 2008. These funds accelerate the introduction of "near market ready" energy efficiency innovations into the market.

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Emerging Technologies & Research, Development, and Demonstration (continued)

California invests in the development of emerging technologies to accelerate the introduction of new equipment, tools and services that save energy and empower customers to manage their energy use and costs through smart technology.

The California Clean Energy Fund (CalCEF), formed in 2004, will make equity investments totaling at least \$30 million in emerging clean energy technology companies. CalCEF invests in companies that are developing technology and energy-saving products that benefit all customers.

CalCEF has made investments in early-stage companies and has taken a leadership role in advancing the development of new technology for energy efficiency. With a \$1 million dollar leadership grant from CalCEF, the University of California, Davis has established the nation's first Energy Efficiency Center (EEC) to accelerate energy efficiency innovation and to stimulate the transfer of technology into the marketplace.

The California Energy Commission's Public Interest Energy Research (PIER) Program supports energy research, development and demonstration projects that help improve the quality of life in California by bringing environmentally safe, affordable and reliable energy services and products to the marketplace.

The PIER Program annually awards up to \$62 million to conduct the most promising public interest energy research, bringing new energy services and products to the marketplace and creating state-wide environmental and economic benefits.

Websites to visit for more information

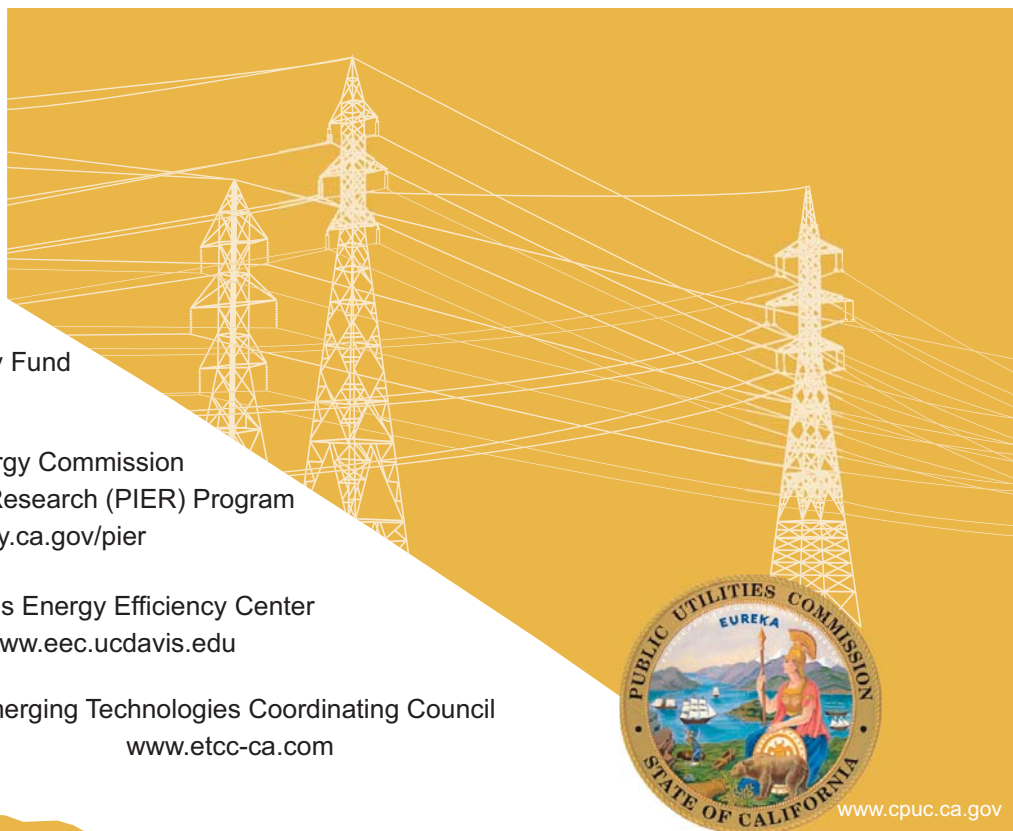
California Public Utilities Commission
www.cpuc.ca.gov

California Clean Energy Fund
www.calcef.org

California Energy Commission
Public Interest Energy Research (PIER) Program
www.energy.ca.gov/pier

UC Davis Energy Efficiency Center
www.eec.ucdavis.edu

Emerging Technologies Coordinating Council
www.etc-ca.com



www.cpuc.ca.gov